He, Jialong

From: IP Law Office of David N. Lathrop [office@lathrop-iplaw.com]
Sent: Thursday, June 17, 2010 12:09 AM
To: He, Jialong
Subject: Notes for Telephone Interview; U.S. patent application no. 10/586,834 (Docket: DOL12401 US)

Dear Mr. He:

Thank you for granting a telephone interview for Friday, June 18 at 2:00 pm EDT.

We wish to discuss the following during the interview:

1. Claims rejected under 35 U.S.C. § 112, first paragraph
2. Patentability of claim 1 over Youn
   The most recent Office Action ignores significant portions of the arguments that we submitted previously and overlooks limitations recited in the claims.
3. Patentability of dependent claims over Youn
   The issues are the same as for claim 1.
4. Patentability of dependent claims over Youn and Youn/Herre
   The most recent Office Action ignores the arguments that we submitted previously.

The following pages contain a discussion of our reasons for traversing the claim rejections.

Very truly yours,
/s/
David N. Lathrop

Claim Rejections Under Section 112

The Office Action indicates that new claims 28, 30, 31, 33, 34 and 36 are rejected under 35 U.S.C. § 112, first paragraph.

Claims 28, 31 and 34

Claims 28, 31 and 34 recites a feature that reads "the measure of processing performance that is higher than the threshold." This feature is disclosed in the specification and it is recited in the originally-filed claims.

Referring to step (c) of claims 1 and 19, and to the means for analyzing in claim 10, each of these base claims recites a "measure of processing performance … is higher than a threshold." The dependent claims 28, 31 and 34 merely refer to what is recited in these originally-filed claims.

The claimed feature is supported by the specification. Referring to the text from line 27 on page 6 to line 8 on page 7, the specification states the following (emphasis added):

> … The optimization to be performed is to optimize the grouping of blocks within a frame given one or more constraints. These constraints may vary from one application to another and <u>may be expressed as a maximation of excellence in</u>

> signal processing results such as encoded signal fidelity or they may be expressed as a minimization of an inverse processing result such as encoded signal distortion. ... Measures of signal distortion are discussed below but these are merely examples of a wide variety of quality measures that may be used. The techniques discussed below may be used with measures of signal processing excellence such as encoded signal fidelity, for example, by reversing comparisons and inverting references to relative amounts such as high and low or maxima and minima.

The section of the description on page 9 that is cited in the Office Action discusses a "sum of distortions." As explained in the specification, distortion is an inverse to the claimed measure of processing performance or "excellence in results obtainable by processing." The comparison with respect to the threshold is to be reversed from what is discussed on page 9.

Claims 30, 33 and 36

Claims 30, 33 and 36 recite a feature that reads "the measure of processing performance is responsive to a total number of bits available to represent a respective frame of blocks." An embodiment that reads on this claim feature is disclosed in the section of the description that describes the use of a floating-point representation of transform coefficients. The accuracy of the representation is the claimed "measure of processing performance" or "excellence in results obtainable by processing each block" and this accuracy "is responsive to" the total number of bits available to represent a frame of blocks.

The Office Action recognizes this section of the disclosure but alleges that it "does not provide a clear support" for the limitations. No reasons or justification are given for this conclusion.

The Applicants disagree and respectfully submit that the text on page 6 that is cited in the Office Action is part of a specification that provides a written and enabling description for a person who has at least ordinary skill in the relevant arts to practice what is claimed. The nature of the claimed measurement and its responsive nature to the total bits available to represent a frame of blocks are set forth clearly. Referring to lines 10-14 on page 6 the specification states:

> Various aspects of the present invention may be implemented in an audio encoder by optimizing the number of groups and the group boundaries between groups of blocks to minimize encoded signal distortion. A tradeoff may be made between the degree of minimization and either or both of the total number of bits used to represent a frame of an encoded signal and the computational complexity of the technique used to optimize the group arrangements. In one implementation, this is accomplished by minimizing a measure of mean square error energy.

The Applicants submit that this text and the disclosure that follows lack nothing to meet the requirements of 35 U.S.C.§ 112, first paragraph.

Claim Rejections Under Section 102

The Office Action indicates that claims 1-6, 8-15, 17-24, 26-30, 33 and 36 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. patent 7,283,968 (referred to as "Youn").

The Office Action rejects these claims using rationale that were set forth in a prior office action. The Applicants responded with arguments and the most recent Office Action indicates that those arguments were not persuasive.

The Applicants respectfully traverse the rejections and submit that the most recent Office Action is not responsive to their arguments. The Office Action overlooks portions of the arguments and overlooks portions of the claimed features that are not disclosed in the prior art.

Claim 1

Step (b)

The Applicants submit that Youn does not disclose the claimed measures of quality.

A prior office action indicated that these claimed measures of quality are disclosed as distortion level (col. 2 ln. 6) and perceptual entity (col. 2 ln. 11). In their prior response, the Applicants explained that the "distortion level" and "perceptual entropy" are not the claimed measures of quality for each of at least three reasons. They also explained why energy, which was not mentioned in the prior office action but is mentioned in the most recent Office Action, cannot be the claimed measures of quality.

(1) The distortion level, which actually is an "allowable distortion level" as stated in col. 2 ln. 6, perceptual entropy, and energy are intrinsic characteristics of a signal rather than a measure of processing results as recited in (b)(4).
(2) The allowable distortion level, perceptual entropy and energy as disclosed in Youn are not associated with "each set in a plurality of sets of groups" of blocks or short windows. As recited in (b)(1) of the claim, each set of blocks has an associated measure of quality.
(3) Youn does not teach using the allowable distortion level or perceptual entropy to control grouping as required by step (c).

The most recent Office Action does not address these arguments but instead states that "all disclosed measurements read on the term 'measures of quality'" because "claim 1 only recites 'obtaining two or more measures of quality' without saying how quality is measured and what calculation is used. Since 'measures of quality' is just a name of measurement, the Examiner gives the term a broadest reasonable interpretation in light of the supporting disclosure."

The Applicants disagree. The term "measures of quality" is not just a name because the claim recites limitations for these measures. The Applicants' prior response discussed some of these limitations and gave reasons why these limitations are not disclosed in Youn. Any one of the reasons is sufficient to traverse the rejection. The Office Action does not address the arguments and it appears to ignore the limitations.

Step (c)

The Applicants respectfully submit that Youn does not disclose all features of this step.

In their prior response, the Applicants explained that Youn does not disclose this step for at least two reasons. First, Youn does not disclose using the claimed measures of quality to control the grouping of blocks. Second, regardless what measure is used, Youn does not disclose the specific grouping that is recited in the claim.

In reply the most recent Office Action states "Youn clearly discloses energy is used to identify a selected set of groups. Again, the claim does not recite how the 'measure of processing performance' is calculated. The term 'measure of processing performance is just a name of measurement. Youn discloses using a proper grouping to prevent degradation of sound quality. Youn also discloses using two preliminary groups if possible." (citations omitted)

The Applicants respectfully submit that this reply does not respond to their arguments. The Office Action refers to "energy" (disclosed in Youn as gradient energy) but it does not show how this energy meets all limitations for the claimed measure of quality and it does not show how/where Youn teaches all limitations of step (c).

The Applicants do not dispute that Youn teaches forming groups of windows or blocks; what they dispute is that Youn teaches ALL limitations of step (c) that identifies a set having a minimum number of groups meeting specified criteria.

Claim 2

The Office Action indicates (see page 4) the Applicants' prior argument was not persuasive because nothing about how the blocks are processed is claimed.

The Applicants disagree. Claim 1 does set forth how the blocks are processed in step (c). The Office Action does not explain how the blocks of time-domain samples are processed as claimed. Instead, it relies on something disclosed in Youn that is unrelated to teachings that are used to reject claim 1.

Claim 5

The Office Action indicates (see page 5) the Applicants' prior argument was not persuasive because the term "measure of cost" is just a name of measurement and that "if anything is related to a set of groups, it is 'affiliated' with the set of groups. Since Youn discloses to group blocks into groups to share side information (e.g., scale factor), side information is affiliated with a set of groups of blocks."

The Applicants disagree and submit the Office Action does not respond to their arguments.

First, the claim recites features of the claimed "measures of cost" and the Office Action ignores them. The "measure of cost represents an amount of resources needed to process the blocks in the affiliated set according to the associated control parameters." Furthermore, the "the measure of processing performance is obtained in part from the measure of cost affiliated with the selected set." These features are related to features recited in claim 1. The Office Action ignores this relationship and relies on something in Youn without regard to how it relates to the teachings in Youn that are used to reject claim 1.

Second, the Applicants argued that Youn does not teach how to use the "side information" to control the grouping of blocks. The Office Action does not address this argument.

Claim 6

The Office Action indicates (see page 5) that the Applicant's prior argument was not persuasive because Youn discloses a process that is repeated for every speech frame.

The Applicants respectfully submit that the repetition referred to in the Office Action does not correspond to the claimed iteration. The iterations recited in claim 6 refer to a process that is performed in claim 1, which is performed for a single frame of blocks. Youn does not disclose the claimed iterative process.

Claim 8

The Office Action indicates (see page 6) that the claimed "measure of cost" is just a value and the claim requires only that this value be responsive to the amount of data needed to represent control parameters in an encoded signal. The Office Action states that because "side information obtained from speech signal and is related to encoding parameters, therefore, the side information is responsive to the amount of encoded data."

The Applicants disagrees for at least three reasons. First, the assertion that "side information is responsive to the amount of encoded data" is mere speculation unsupported by what is disclosed in Youn. The Applicants submit that this statement is not only unsupported, it is likely not true.

Second, the claimed measure of cost pertains to a representation of the control parameters recited in claim 1. The side information in Youn does not correspond to this aspect.

Third, the features recited in claim 8 pertain to specific features recited in claims 1 and 5. The Office Action has not shown how the features in Youn that it is relying on have the appropriate relationship with teachings in Youn that are used to reject claims 1 and 5. The Applicants submit that the required relationship is missing.

Claim 9

The Office Action indicates (see page 6) that the claimed computational resources can be anything (e.g., RAM, ROM, disk space, CPU time) and that "calculating the side information for different frames needs different amount of CPU time or memory. In other words, calculating the side

information is related to the available of CPU time and memory."

The Applicants submit that even if this is true, it is not pertinent to what is claimed. The Office Action has not shown how the side information is responsive to amounts of computational resources needed to process blocks of audio information. It has alleged only that computational resources are required to calculate the side information. There is no teaching in Youn and the Applicants know of nothing in the prior art that suggests the side information is responsive to the amount of computational resources that are used.

Claims 30, 33, 36

With regard to new claims 30, 33 and 36, the Office Action refers to a feature in Youn that is unrelated to anything that is used to reject the independent base claim upon which these claims depend. If the Office Action must rely on a particular teaching to reject a dependent claim, it is necessary to show that the teaching has the same relationship with other teachings used to reject the base claims as the relationship between the dependent claim features and the base claim features. This relationship does not exist.

Claim Rejections Under Section 103

The Office Action indicates that claims 29, 32 and 35 are rejected under 35 U.S.C. § 103 as being unpatentable over Youn in view of U.S. patent 6,424,939 (referred to as "Herre").

The Applicants explained previously that there would not have been any motivation to make the alleged combination and that there would not have been any obvious way to make the alleged combination. The Applicants also requested that, if this rejection were to be maintained, the next office action "explain how the spectral prediction errors in Herre could be substituted for energy in Youn to control the grouping of blocks as well as explain what would be the obvious motivation to make such a substitution."

The Office Action ignored the arguments and the request and merely repeated the rejection.